

EMA12K-850380

EVALUATION DATA

型式データ

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使用記号 Terminology used

Ta	: 周囲温度 Ambient temperature	f	: 周波数 Frequency
Vin	: 入力電圧 Input voltage	Iin	: 入力電流 Input current
Vo	: 出力電圧 Output voltage	Io	: 出力電流 Output current
+Vin	: 入力＋端子 Input + terminal	-Vin	: 入力－端子 Input – terminal
+Vo	: 出力＋端子 Output + terminal	-Vo	: 出力－端子 Output – terminal
tr	: 立ち上がり時間 Rise time	tf	: 立ち下がり時間 Fall time

※当社測定条件における結果であり、参考値としてお考え願います。

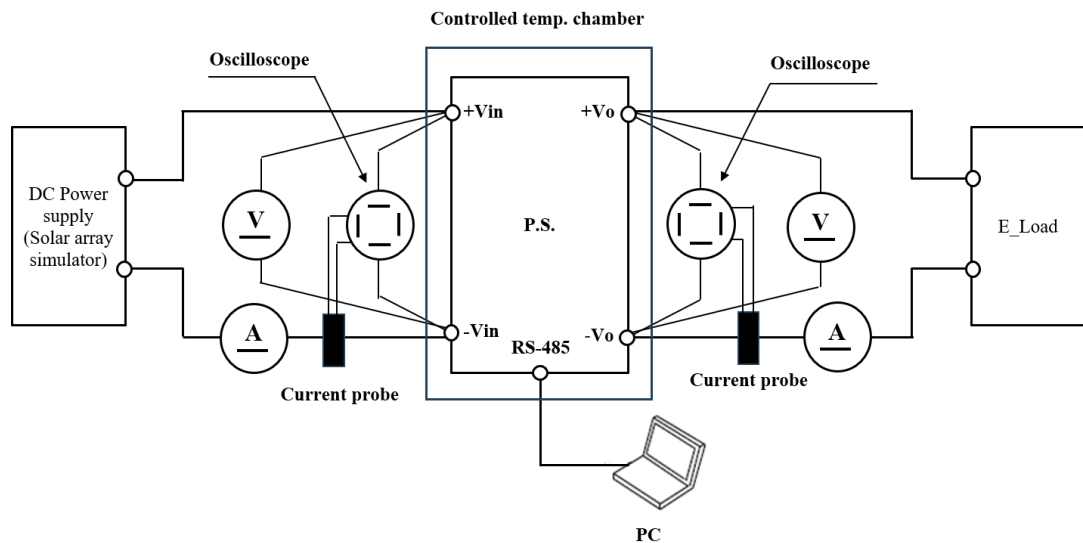
Test results are reference data based on our measurement condition.

1. 測定方法 Evaluation Method

1-1. 測定回路 Circuit used for determination

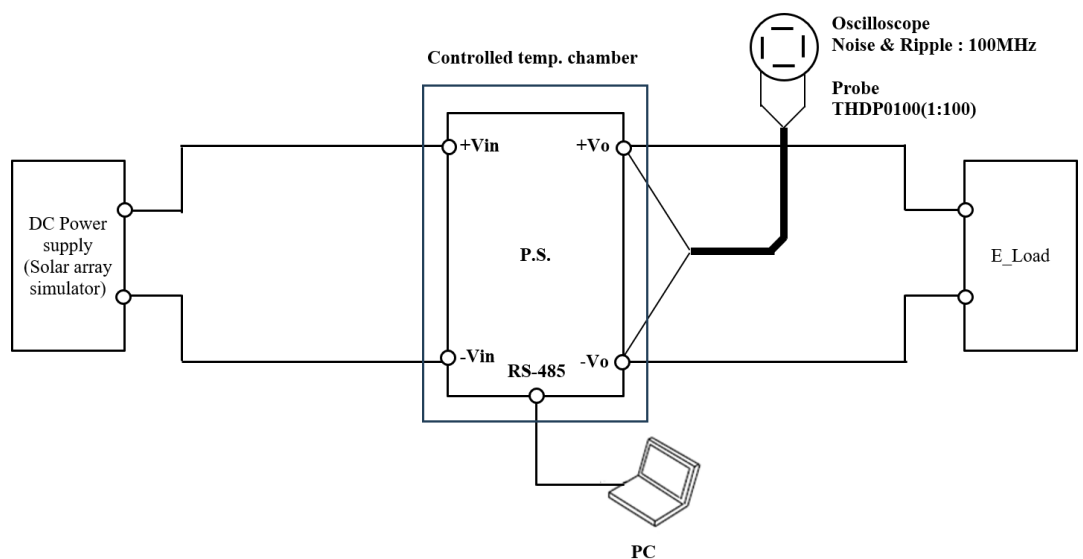
測定回路 1 Circuit 1 used for determination

効率	Efficiency
通電ドリフト	Warm up voltage drift
待機電力	Standby power



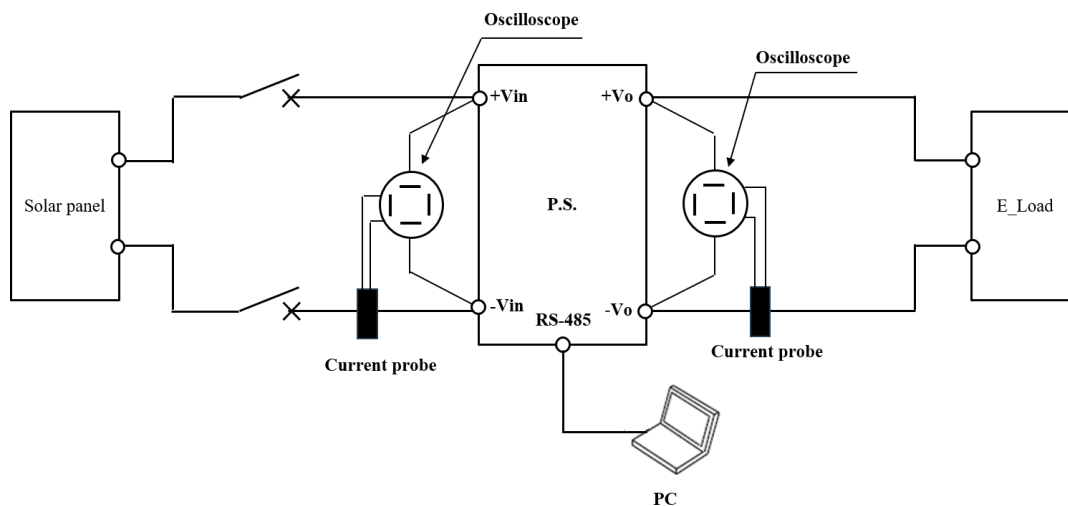
測定回路 2 Circuit 2 used for determination

リップル、ノイズ	Ripple and noise
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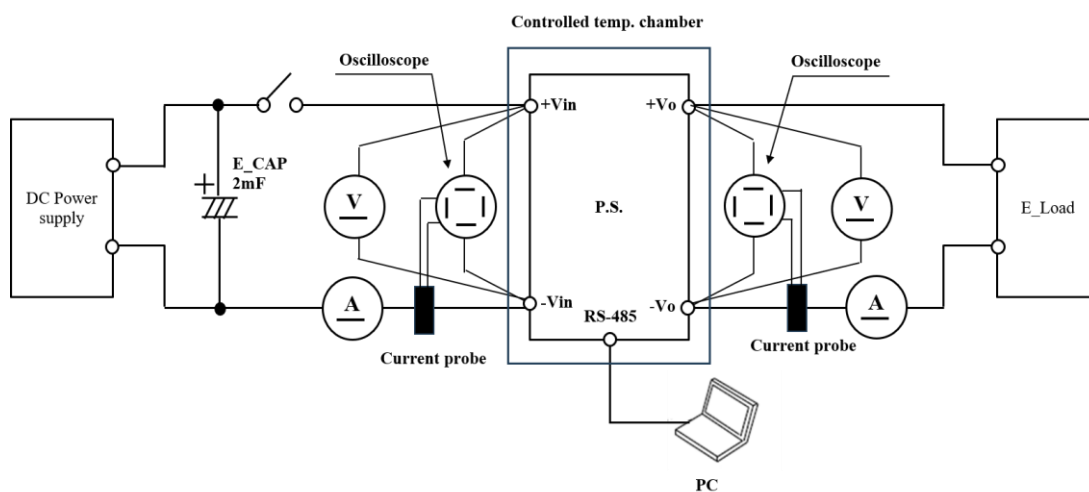


測定回路 3 Circuit 3 used for determination

立ち上り、立下り Rise and fall

測定回路 4 Circuit 4 used for determination

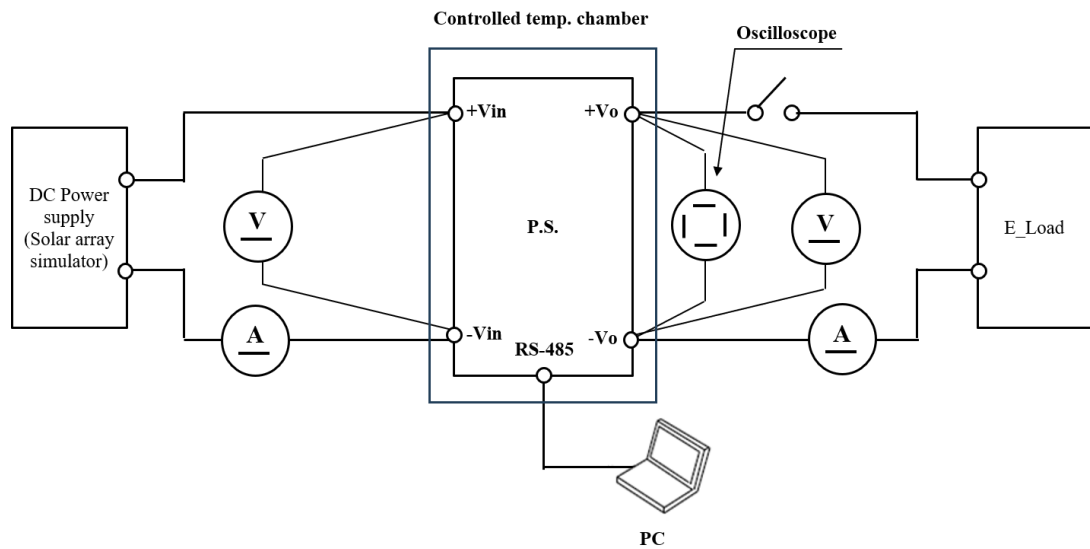
突入電流 Inrush current



測定回路 5 Circuit 5 used for determination

過電圧保護特性

Over voltage protection(OVP)



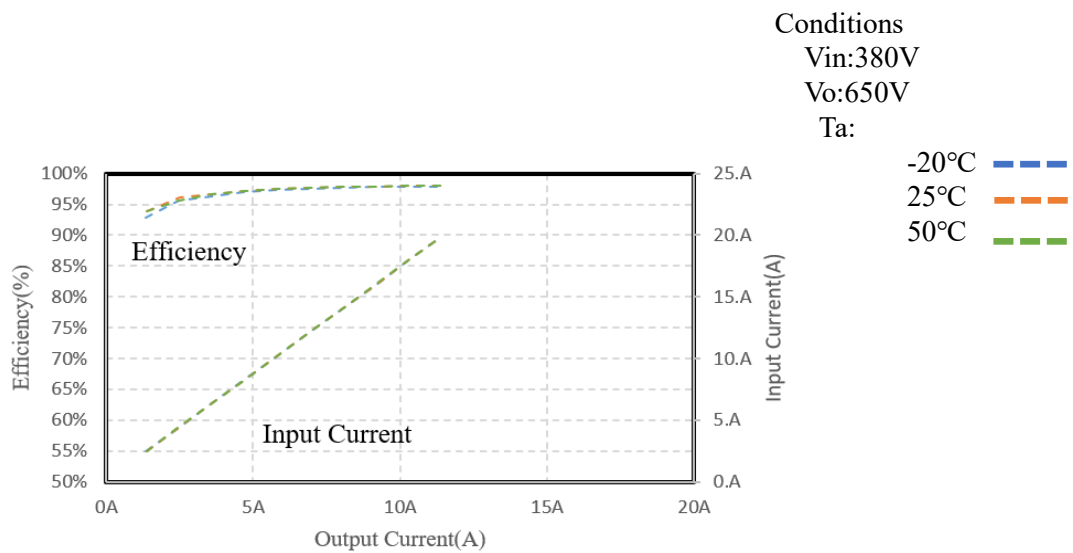
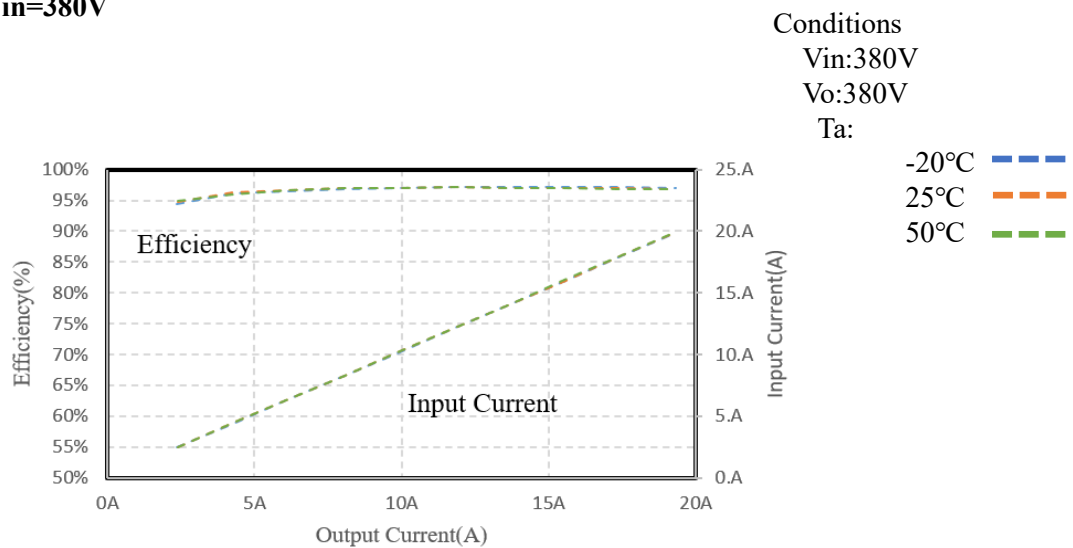
1-2. 使用測定機器 List of equipment used

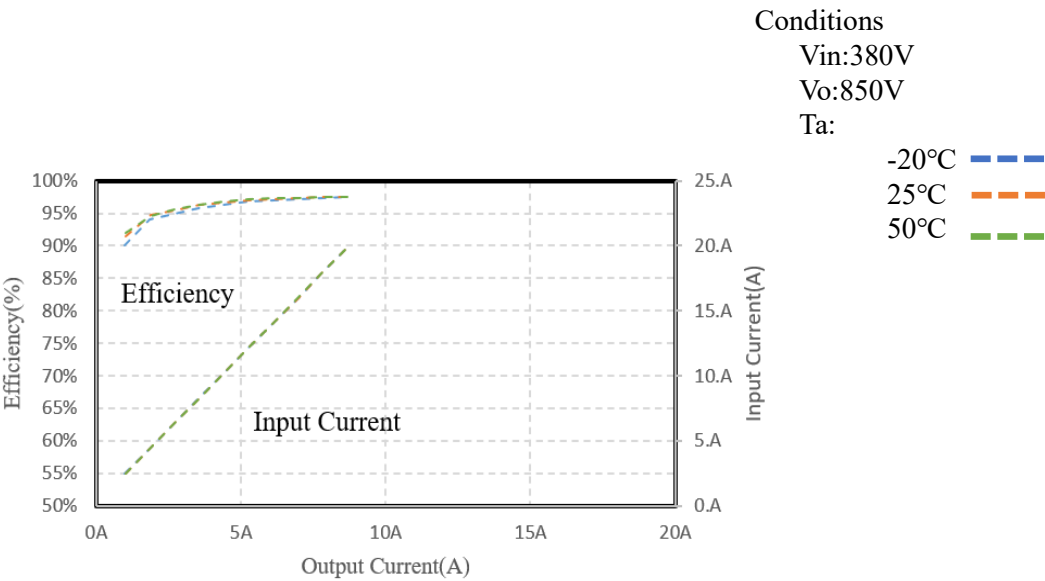
	EQUIPMENT USED	MANUFACTURER	MODEL NO.
1	Solar array simulator	Chroma	62180D-1800
2	Electronic load	KIKUSUI	PLZ20005WH2
3	Power meter	YOKOGAWA	WT1803E
4	Oscilloscope	Tektronix	MDO3054
			MDO4054
5	High-voltage differential probe	Tektronix	THDP0100
6	Current probe	Tektronix	TCP0150
7	Controlled temp. chamber	ESPEC	PU-4J
8	Solar panel	SHARP	NU-285SH

2. 特性データ Characteristics

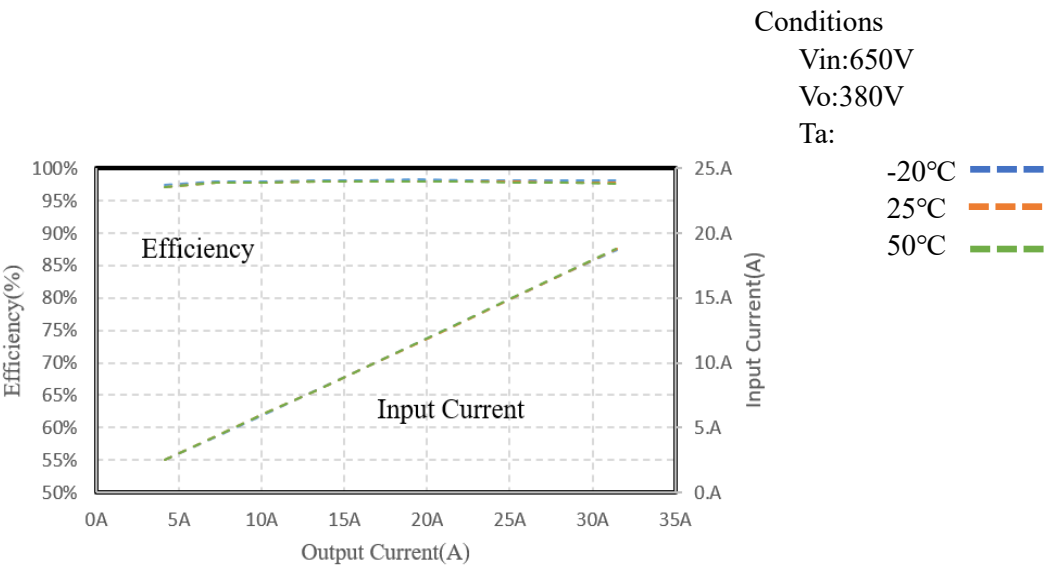
2-1. 効率 Efficiency

(1) $V_{in}=380V$





(2) Vin=650V



EMA12K-850380

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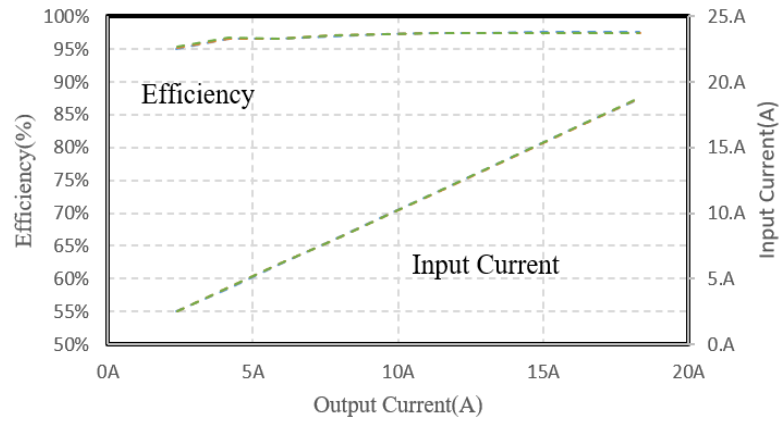
Conditions

Vin:650V

Vo:650V

Ta:

-20°C ---
25°C ---
50°C ---



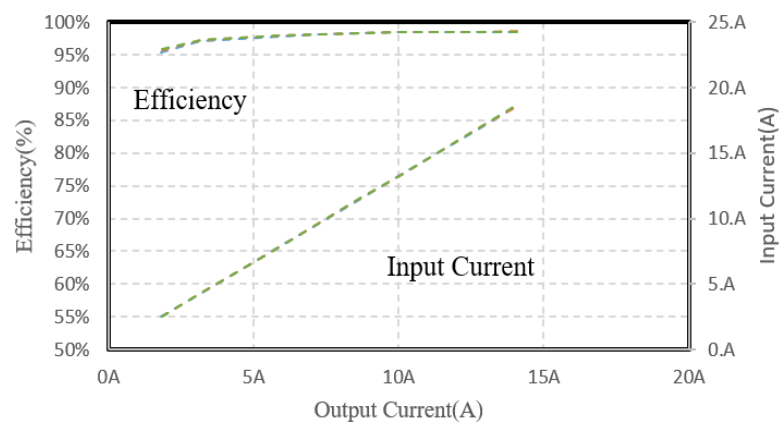
Conditions

Vin:650V

Vo:850V

Ta:

-20°C ---
25°C ---
50°C ---



(3) Vin=850V

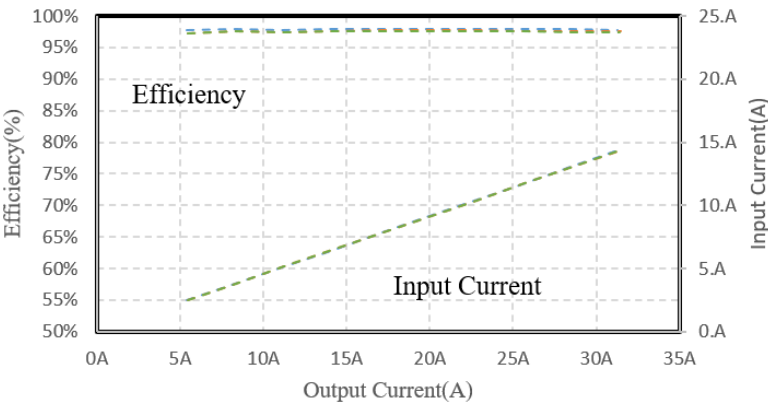
Conditions

Vin:850V

Vo:380V

Ta:

- 20°C
- 25°C
- 50°C



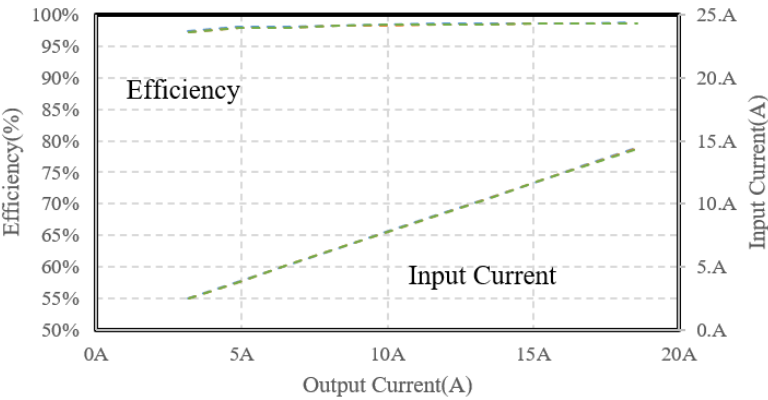
Conditions

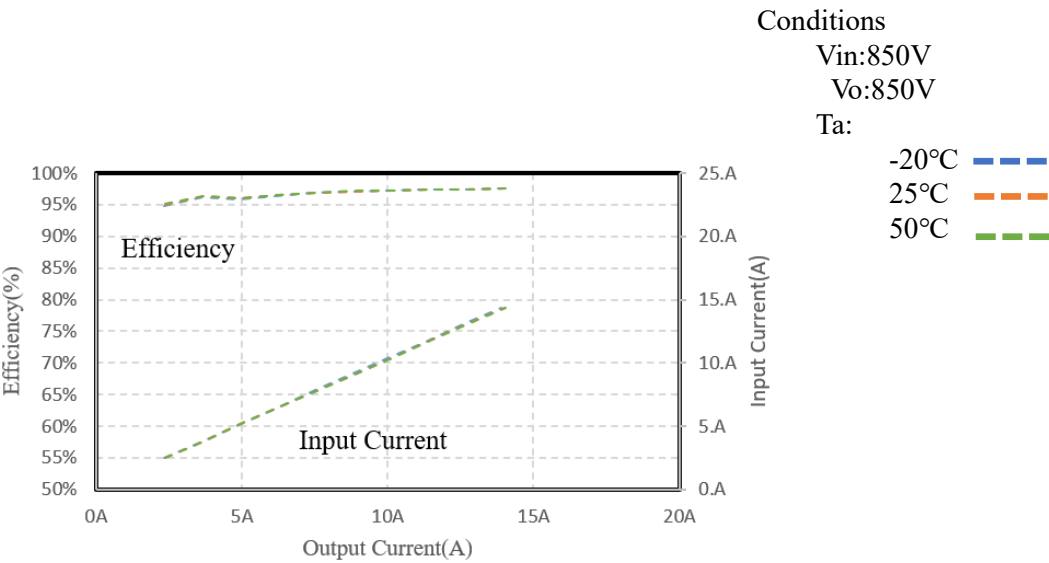
Vin:850V

Vo:650V

Ta:

- 20°C
- 25°C
- 50°C





2-2. リップル、ノイズ Ripple and noise

(1) $V_{in}=380V$

Conditions

$V_{in}=380V$

$V_o=380V$

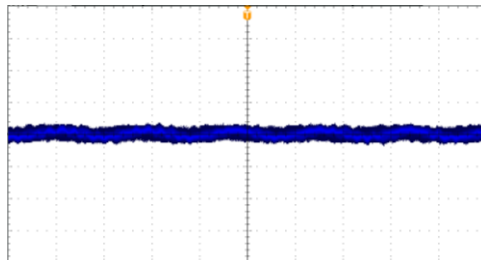
$T_a=25^{\circ}C$

Oscilloscope Settings

$V_o=5V/DIV(AC)$

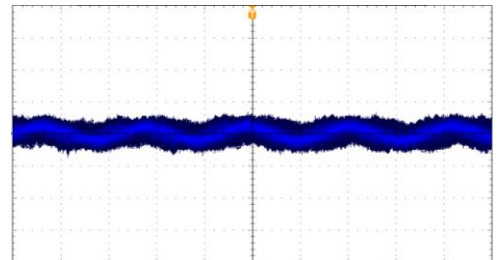
Time=4mS/DIV

$I_o=3A$



Ripple noise=3.4V

$I_o=20A$



Ripple noise=6.4V

(2) $V_{in}=620V$

Conditions

$V_{in}=620V$

$V_o=380V$

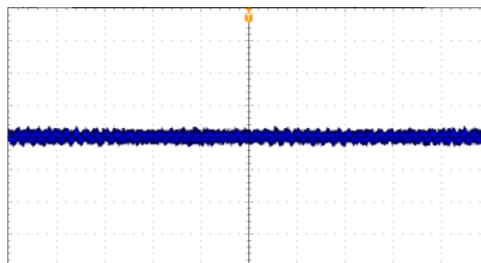
$T_a=25^{\circ}C$

Oscilloscope Settings

$V_o=5V/DIV(AC)$

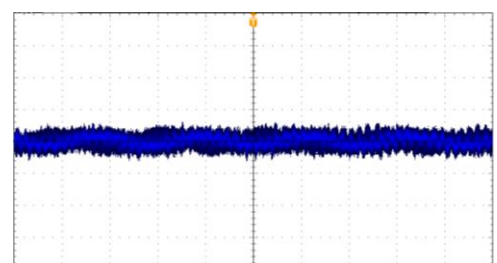
Time=4mS/DIV

$I_o=5.5A$



Ripple noise=3.2V

$I_o=32A$



Ripple noise=5.6V

(3) $V_{in}=800V$

Conditions

$V_{in}=800V$

$V_o=380V$

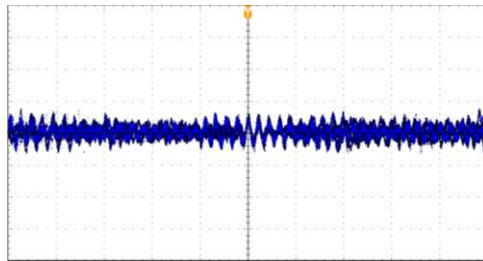
$T_a=25^{\circ}C$

Oscilloscope Settings

$V_o=10V/DIV(AC)$

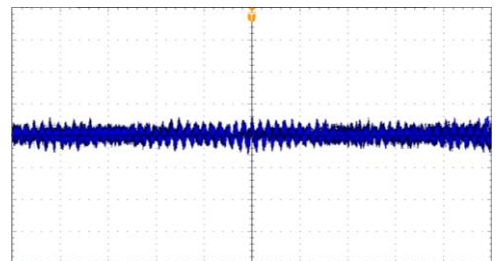
Time=4mS/DIV

$I_o=6.5A$



Ripple noise=12.4V

$I_o=32A$



Ripple noise=10.0V

2-3. 通電ドリフト Warm up voltage drift

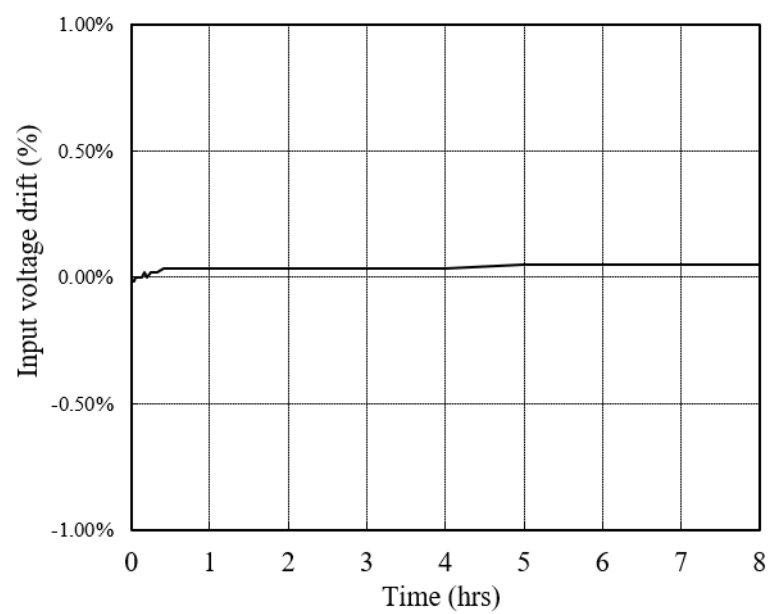
Conditions

$V_{in}=600V$

$V_o=380V$

$I_{in}=20A$

$T_a=25^{\circ}C$



Warm up voltage drift=0.05%

2-4. 立ち上り、立下り Rise and fall

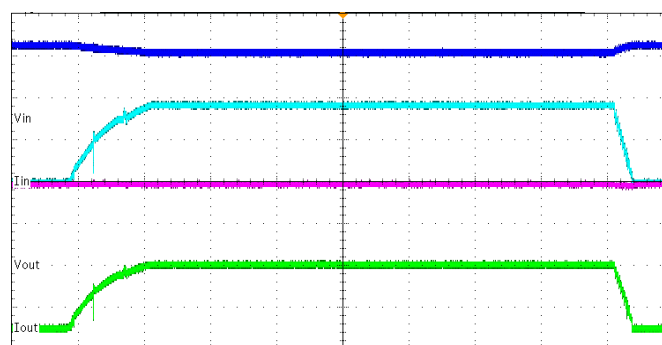
(1) $V_{in}=320V$

Conditions

 $V_{in}=320V$ $V_o=380V$ $I_{in}=10A$ $T_a=25^{\circ}C$

Oscilloscope Settings

Time=2S/DIV

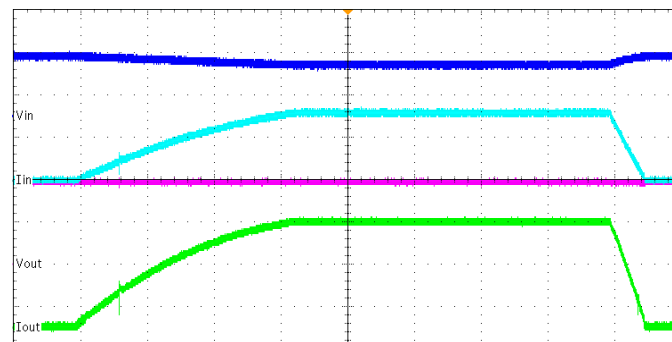
 $V_{in}:200V/DIV$ $I_{in}:5A/DIV$ $V_o:200V/DIV$ $I_o:5A/DIV$ (2) $V_{in}=600V$

Conditions

 $V_{in}=600V$ $V_o=380V$ $I_{in}=15A$ $T_a=25^{\circ}C$

Oscilloscope Settings

Time=2S/DIV

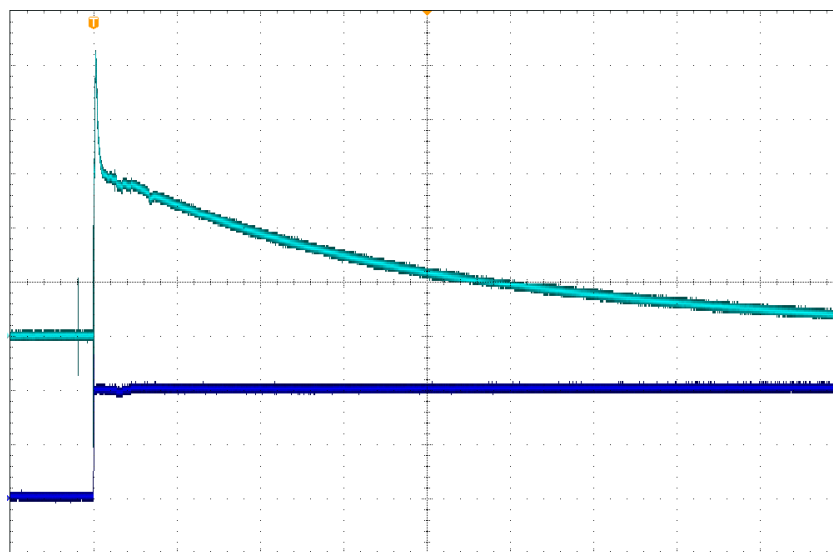
 $V_{in}:500V/DIV$ $I_{in}:10A/DIV$ $V_o:200V/DIV$ $I_o:10A/DIV$

2-5. 突入電流 Inrush current

Conditions

 $V_{in}=1000V$ $T_a=25^{\circ}C$

Oscilloscope Settings

Time=400 μ S/DIV $I_{in}: 5A/DIV$ $V_{in}: 500V/DIV$

Maximum input current=26.3A

2-6. 過電圧保護特性 Over voltage protection(OVP)

(1) $V_{in}=380V$

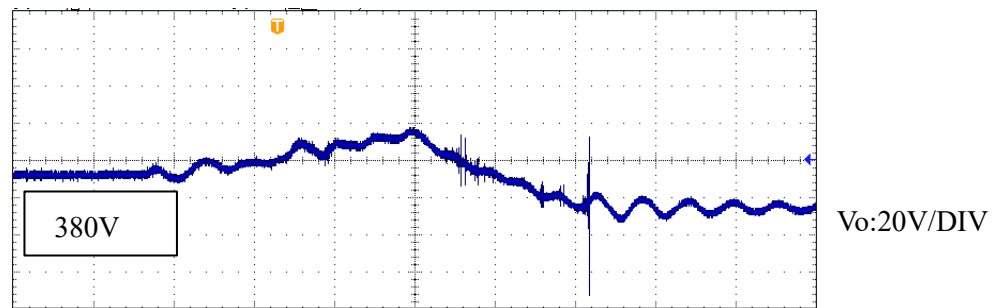
Conditions

 $V_{in}=380V$ $V_o=380V$ $I_o=18A$ $T_a=25^{\circ}C$

EMA12K Settings

Output OVP=400V

Oscilloscope Settings

Time=40 μ S/DIV

Maximum output voltage=407V

(2) $V_{in}=620V$

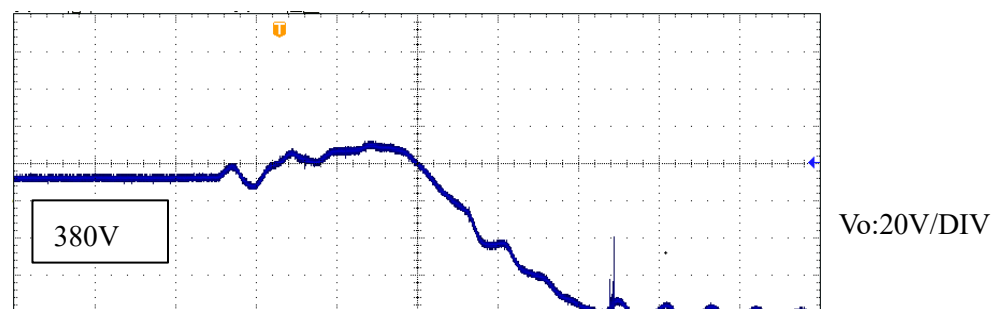
Conditions

 $V_{in}=620V$ $V_o=380V$ $I_o=30A$ $T_a=25^{\circ}C$

EMA12K Settings

Output OVP=400V

Oscilloscope Settings

Time=40 μ S/DIV

Maximum output voltage=401V

(3) Vin=800V

Conditions

Vin=800V

Vo=380V

Io=30A

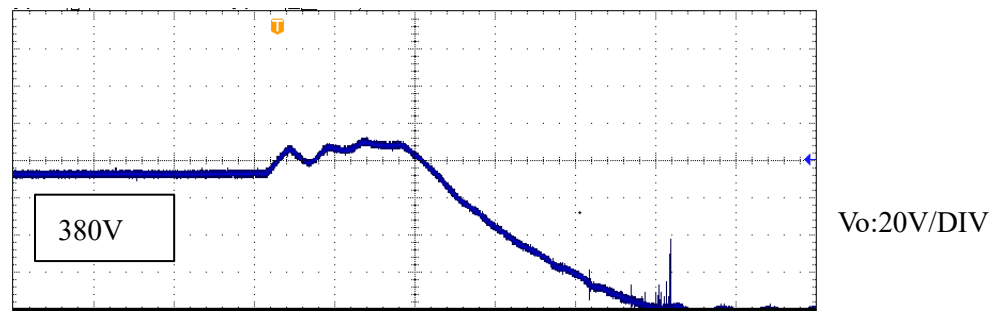
Ta=25°C

EMA12K Settings

Output OVP=400V

Oscilloscope Settings

Time=40uS/DIV



2-7. 待機電力 Standby power

